

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 0837RF-H532-US

In Re Application of:

FRANK B. STAMPS

Serial No. 10/568,170

Filed: 13 NOVEMBER 2006

For: **DUAL SPRING RATE DAMPER**

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Examiner: **BURCH, MELODY M.**

Art Unit: **3657**

Confirmation No. **5513**

AMENDMENT AFTER FINAL

FILED VIA: EFS-WEB

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This Amendment After Final is being filed in response to the Office Action mailed 15 December 2009, which provides for a three-month response period ending 15 March 2010.

Please consider the following amendments and remarks.

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. § 1.8(a)(1)(i)(C)
Date of Transmission: <u>2/10/10</u>
I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office (USPTO) via the USPTO electronic filing system (EFS-Web) on the date shown above.
By: <u>James E. Walton</u> James E. Walton

IN THE CLAIMS:

The following is a complete listing of the claims. Please amend the claims as follows:

1, **(Currently Amended)** A damper having an adjustable spring rate, comprising:

a piston having an axis, an outer surface, and opposing ends;

a housing;

elastomeric seals in sealing contact with the outer surface of the piston, the seals being coaxial with the piston and limiting movement of the piston to a path along the axis of the piston, the seals also defining fluid chambers adjacent the ends of the piston, the seals also being fixed to the housing;

a primary passage communicating the fluid chambers; and

a selectively switchable valve for controlling a flow of fluid from one of the chambers to another of the chambers through the primary passage; and wherein

when the flow of fluid through the primary passage is permitted, movement of the piston is resisted by a first spring rate due to a shear force required to cause shear deflection of the seals; and

when the flow of fluid through the primary passage is restricted, movement of the piston is resisted by a second spring rate due to a fluid force required to cause bulging deflection of the seals.

2. **(Original)** The damper according to claim 1, wherein the elastomeric seals are formed of layers of an elastomeric material and a rigid, non-elastomeric material.

3. **(Previously Presented)** The damper according to claim 1, wherein the switchable valve is located within the primary passage.

4. **(Previously Presented)** The damper according to claim 1, wherein the switchable valve is electrically operated.
5. **(Original)** The damper according to claim 1, wherein the primary passage is located within the piston.
6. **(Original)** The damper according to claim 1, further comprising:
a secondary passage communicating the fluid chambers.
7. **(Original)** The damper according to claim 6, wherein the secondary passage is located within the piston.
8. **(Original)** The damper according to claim 1, further comprising:
a bypass passage for limiting the pressure imbalance between the fluid chambers.
9. **(Original)** The damper according to claim 8, wherein the bypass passage is located within the piston.
- 10 **(Original)** The damper according to claim 8, further comprising:
a bypass valve located within the bypass passage.
11. **(Currently Amended)** A damper providing for selection between at least two spring rates, the damper providing:
a piston having an axis, an outer surface, and opposing ends;
a housing;

elastomeric seals in sealing contact with the outer surface of the piston, the seals being coaxial with the piston and limiting movement of the piston to a path along the axis of the piston, the seals also defining fluid chambers adjacent the ends of the piston, the seals also being fixed to the housing;

a primary passage communicating the fluid chambers;

a secondary passage communicating the fluid chambers; and

a selectively switchable valve for controlling a flow of fluid from one of the chambers to another of the chambers through the primary passage; and wherein

when the flow of fluid through the primary passage is permitted, movement of the piston is resisted by a first spring rate due to a shear force required to cause shear deflection of the seals; and

when the flow of fluid through the primary passage is restricted, movement of the piston is resisted by a second spring rate due to a fluid force required to cause bulging deflection of the seals.

12. **(Original)** The damper according to claim 11, wherein the elastomeric seals are formed of layers of an elastomeric material and a rigid, non-elastomeric material.

13. **(Previously Presented)** The damper according to claim 11, wherein the switchable valve is located within the primary passage.

14. **(Previously Presented)** The damper according to claim 11, wherein the switchable valve is electrically operated.

15. **(Original)** The damper according to claim 11, wherein the primary passage is located within the piston.

16. **(Original)** The damper according to claim 11, wherein the secondary passage is located within the piston.

17. **(Original)** The damper according to claim 11, further comprising:

a bypass passage for limiting the pressure imbalance between the fluid chambers.

18. **(Original)** The damper according to claim 17, wherein the bypass passage is located within the piston.

19 **(Original)** The damper according to claim 17, further comprising:

a bypass valve located within the bypass passage.

20. **(Original)** A method for providing multiple spring rates within a damper, the method comprising the steps of:

sealingly engaging opposite ends of a piston with elastomeric seals to form fluid chambers;

communicating the fluid chambers with a passage;

selectively controlling an amount of fluid flow through the passage, such that movement of the piston is resisted by a total spring rate, which is the sum of a first spring rate due to a shear force required to cause shear deflection of the seals and a second spring rate due to a force required to cause bulging deflection of the seals by fluid pressure induced by the movement of the piston.

The Applicants submit that the foregoing amendments add no new matter to the application.

REMARKS:

Claim 20 is directed to a non-elected invention and was previously withdrawn. Claims 1-19 are pending in the application. Claims 1 and 11 are currently amended.

Claims 1-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 2,774,553 to Jensen ("Jensen") in view of U.S. Patent No. 5,535,861 to Young ("Young").

Rejections Under 35 U.S.C. § 103(a):

Claims 1-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jensen in view of Young. However, since Jensen and Young, whether considered separately or in combination as proposed by the Examiner, fails to disclose all of the limitations of Claims 1-19 as discussed below, this rejection is respectfully traversed.

Claims 1-10

Claim 1 is an independent claim, and Claims 2-10 depend, directly or indirectly, from Claim 1. Accordingly, the remarks herein made in connection with Claim 1 apply equally to Claims 2-10.

The Office Action acknowledges that a difference between the seals in Jenson and the seals of the claimed invention is that the seals in the claimed invention are fixed to the housing. The Office Action further states that this distinction is not recited in the claims.

Claim 1 is hereby amended to include the limitation of the seals being fixed to the housing. The Applicants make this amendment to Claim 1 in order to further prosecution. As noted by the Office Action, Jenson does not disclose seals being fixed to the housing. Furthermore, Young fails to cure this deficiency of Jenson. The Applicants submit that Claim 1, and Claims 2-10 which depend from Claim 1, are in condition for allowance. The Applicants submit that Claim 1, as amended, overcomes the Examiner's rejections under 35 U.S.C. § 103(a), and that Claim 1, as amended, and Claims 2-10, are now in

prima facie condition for allowance. Therefore, the Applicants respectfully request that Claims 1-10 be allowed.

Claims 11-19

Claim 11 is an independent claim, and Claims 12-19 depend, directly or indirectly, from Claim 11. Accordingly, the following remarks made in connection with Claim 11 apply equally to Claims 12-19.

The Office Action acknowledges that a difference between the seals in Jenson and the seals of the claimed invention is that the seals in the claimed invention are fixed to the housing. The Office Action further states that this distinction is not recited in the claims.

Claim 11 is hereby amended to include the limitation of the seals being fixed to the housing. The Applicants make this amendment to Claim 11 in order to further prosecution. As noted by the Office Action, Jenson does not disclose seals being fixed to the housing. Furthermore, Young fails to cure this deficiency of Jenson. The Applicants submit that Claim 11, and Claims 12-19 which depend from Claim 1, are in condition for allowance. The Applicants submit that Claim 11, as amended, overcomes the Examiner's rejections under 35 U.S.C. § 103(a), and that Claim 11, as amended, and Claims 12-19, are now in *prima facie* condition for allowance. Therefore, the Applicants respectfully request that Claims 11-19 be allowed.

CONCLUSION:

The Applicants submit that the foregoing remarks place the subject application in *prima facie* condition for allowance. As such, the Applicants respectfully request reconsideration and a Notice of Allowance.

This Amendment After Final is being filed via the U.S. Patent and Trademark Office's EFS-Web electronic filing system. No fees are deemed to be necessary; however, the undersigned hereby authorizes the Commissioner to charge any fees which may be required, or credit any overpayments, to **Deposit Account No. 502806**.

Respectfully submitted,

2/10/10
Date

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